

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
MONITORING AND REPORTING PROGRAM NO.

FOR
JERRY G. BRASSFIELD
BRASSFIELD ESTATE WINERY
LAKE COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring of the process wastewater, ponds, land application area, solids, and groundwater. This MRP is issued pursuant to Water Code Section 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All wastewater samples should be representative of the volume and nature of the discharge. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Process wastewater flow monitoring shall be conducted continuously using a flow meter and shall be reported in cumulative gallons per day.

Field test instruments (such as pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use of the instrument;
2. The instruments are field calibrated prior to each use;
3. Instruments are serviced and/or calibrated at the frequency recommended by the manufacturer;
and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

INFLUENT MONITORING

Process wastewater samples shall be collected prior to entering the wastewater treatment ponds. Influent monitoring for the process wastewater system shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	Gallons	Metered	Continuous ¹	Monthly
BOD ₅ ²	mg/L	Grab	Monthly	Monthly

¹Continuous monitoring requires daily meter reading or automated data collection.

²Five-day, 20° Celsius Biochemical Oxygen Demand.

POND MONITORING

Samples shall be collected from an established sampling station located in an area that will provide a sample representative of the water in each storage pond. Freeboard shall be measured vertically from the surface of the pond water to the lowest elevation of the surrounding berm and shall be measured to the nearest 0.1 feet. Monitoring of each pond shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen ¹	mg/L	Grab	Weekly	Monthly
Freeboard	feet (± 0.1)	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm Seepage ²	NA	Observation	Weekly	Monthly

¹ Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

² Containment levees shall be observed for signs of seepage or surfacing water along the exterior toe of the levees. If surfacing water is found, then a sample shall be collected and tested for total dissolved solids

EFFLUENT MONITORING

Effluent samples shall be collected from the effluent storage tanks prior to discharge to the land application area, and shall be representative of the volume and nature of the discharge. Effluent monitoring shall include at a minimum the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
pH	pH units	Grab	Weekly	Monthly
Specific Conductivity	$\mu\text{mhos/cm}$	Grab	Monthly	Monthly
BOD ₅ ¹	mg/L	Grab	Monthly	Monthly
Nitrates as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl Nitrogen	mg/L	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Sulfate	mg/L	Grab	Monthly	Monthly

¹ Five-day, 20° Celsius Biochemical Oxygen Demand.

LEACHATE COLLECTION AND RECOVERY SYSTEM MONITORING

The Leachate Collection and Recovery System (LCRS) sump shall be inspected monthly for leachate. Upon detection of leachate in a previously dry sump, the Discharger shall immediately collect a grab sample of the leachate and shall continue to collect grab samples of the leachate at the following frequencies thereafter. The sump shall be sampled and analyzed for the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	Gallons	Calculated	Daily	Monthly
pH	pH units	Grab	Weekly	Monthly
Specific Conductivity	$\mu\text{mhos/cm}$	Grab	Monthly	Monthly
BOD ₅ ¹	mg/L	Grab	Monthly	Monthly
Nitrates as Nitrogen	mg/L	Grab	Monthly	Monthly
Total Kjeldahl	mg/L	Grab	Monthly	Monthly

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Nitrogen				
Total Dissolved Solids	mg/L	Grab	Monthly	Monthly
Sulfate	mg/L	Grab	Monthly	Monthly

¹ Five-day, 20° Celsius Biochemical Oxygen Demand.

LAND APPLICATION AREA MONITORING

The Discharger shall conduct monitoring of process wastewater discharged for irrigation to the land application area. Monitoring shall be conducted **daily** during operation and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions shall be noted in the report. Loading rates for the land application areas shall be calculated. Monitoring of the land application area shall include the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Flow	Gallons	Continuous ¹	Daily	Monthly
Local Rainfall	inches	Measurement	Daily	Monthly
Acreage Applied ²	Acres	Calculated	Daily	Monthly
Application Rate	gal/acre/day	Calculated	Daily	Monthly
Total Nitrogen Load Rate ³	lbs/acre/month ⁴	Calculated	Monthly	Monthly
Total Dissolved Solids Loading Rate	lbs/acre/month ⁴	Calculated	Monthly	Monthly
BOD ₅ Loading Rate	lbs/acre/day ⁵	Calculated	Monthly	Monthly

¹Continuous monitoring requires daily meter reading or automated data collection.

²Land Application Area(s) in use shall be identified by name or number and the acreage provided. If a portion of an area is used, then the acreage shall be estimated.

³Total nitrogen applied from all sources, including fertilizers and supplemental irrigation water if used.

⁴Report monthly total and cumulative annual to date.

⁵Report 7-day average and maximum daily loading.

The Discharger shall also visually monitor the land application area **daily** during any period of process wastewater discharge. Observations shall include presence of solids buildup, standing water, observed runoff, presence of nuisance such as odors, vectors or insects, and other relevant physical conditions. Notes on disposal area conditions shall be recorded, and submitted in the regular monitoring reports.

SOLIDS MONITORING

The Discharger shall record and report monthly the quantity, disposal location, and method of disposal of solids disposed of during the processing season, as well as during the off-season, if applicable. If solid waste is shipped offsite, then a description of the quantity of each type of waste shipped offsite and the

location of the disposal area(s) shall be included with the report.

GROUNDWATER MONITORING

This monitoring program applies to the four wells shown of Attachment C-1 of the WDRs and the wells that must be installed around the aerated pond and new disposal field. Prior to construction and/or sampling of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP and shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved EPA methods and water table elevations shall be calculated and used to determine groundwater gradient and direction of flow.

Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater monitoring shall include, at a minimum, the following:

<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling and Reporting Frequency</u>
Depth to Groundwater	0.01 feet	Measurement	Quarterly
Groundwater Elevation ¹	0.01 feet	Calculated	Quarterly
Gradient	feet/feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
pH	std.	Grab	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Volatile Dissolved Solids	mg/L	Grab	Quarterly
Sulfate	mg/L	Grab	Quarterly
Standard Minerals ²	mg/L	Grab	Annually

¹Groundwater elevation shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well.

²Standard Minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, total alkalinity (including alkalinity series), and hardness.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer

or Professional Geologist and signed/stamped by the registered professional.

A. Monthly Monitoring Reports

Monthly reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the reports shall include:

1. Results of influent, pond, effluent, LCRS, land application area, and solids disposal monitoring;
2. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format;
3. If requested by staff, copies of laboratory analytical report(s);
4. A calibration log verifying calibration of all hand held monitoring instruments and devices used to comply with the prescribed monitoring program;
5. The total pounds of total dissolved solids (year to date) that have been applied to the land application area, as calculated from the sum of the monthly loadings;
6. The total pounds of nitrogen in fertilizer applied to the land application area for the month; and
7. The total wastewater flow (year to date).

B. Quarterly Report

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Quarterly monitoring reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarterly report is due by May 1st) and may be combined with the monthly report. The Quarterly Report shall include the following:

1. Results of the groundwater monitoring;
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of the monitoring data to the groundwater limitations and an explanation of any violation of those requirements;

6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

An Annual Report shall be prepared as the December monthly monitoring report. The Annual Report will include all monitoring data required in the monthly and quarterly schedule. The Annual Report shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

1. The contents of the regular monthly and quarterly monitoring report for the last month and quarter of the year, respectively;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. Results of the annual effluent and groundwater monitoring;
4. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in gallons and inches), BOD, total nitrogen, and total dissolved solids;
5. The total wastewater flow for the year;
6. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control and groundwater protection, including consideration of application management practices (i.e.: waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), soil profile monitoring data and groundwater monitoring data;
7. A summary of the quantity of solid waste (lees, stems, pomace, etc) generated and disposed of both on and off the site;
8. An evaluation of the groundwater quality beneath the ponds and the land application area;
9. Estimated monthly flows for the next calendar year;
10. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements; and
11. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

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A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

(Date)

GJC:6-Oct-05